

CLAIMS

1 1. A sample holder system for an automated sample analyzer, comprising:
2 a first well strip comprising a plurality of wells and a first end and a second end;
3 at least a second well strip comprising a plurality of wells and a first and a second end;
4 and
5 an interlocking device comprising a first engagement piece disposed on said first well
6 strip and a second engagement piece disposed on the second well strip wherein said first and
7 second engagement pieces cooperate to reversibly attach said first well strip with said second
8 well strip to form a sample holder system.

1 3. The sample holder system of claim 2 wherein said first well strip and said second
2 well strip are substantially the same.

1 4. The sample holder system of claim 2 wherein said first engagement piece is
2 positioned substantially adjacent the first end of the first well strip and the second engagement
3 piece is positioned substantially adjacent the second end of said second well strip.

1 5. The sample holder system of claim 2 wherein said first engagement piece is
2 positioned on a first side wall of said first well strip and said second engagement piece is
3 positioned on a second side wall of said second well strip.

1 6. The sample holder system of claim 2 wherein said first and second engagement
2 pieces are reversibly interlockable by horizontally sliding said first well strip relative to said
3 second well strip.

1 7. The sample holder system of claim 2 comprising:
2 a second engagement piece positioned at the second end of the first well strip; and
3 a first engagement piece positioned at the second end of the second well strip.

1 8. The sample holder system of claim 1 wherein said first engagement piece
2 comprises a flange and said second engagement piece comprises a slot and a slit.

1 9. The sample holder system of claim 5 wherein said first engagement piece
2 positioned at the first end of the first well strip comprises a flange, and said second engagement
3 piece positioned at said second end of said second well strip comprises a slot and a slit.

1 10. The sample holder system of claim 7 wherein said second engagement piece
2 positioned at the second end of said first well strip comprises a slot and said first engagement
3 piece positioned at said second end of said second well strip comprises a flange.

1 11. The sample holder system of claim 1 wherein said interlocking device comprises
2 a first engagement piece and a second engagement piece.

1 12. A well strip, comprising:
2 a plurality of wells;
3 a first engagement piece; and
4 a second engagement piece, wherein

5 said first engagement piece is configured to interlock with a complementary second
6 engagement piece of another well strip, and said second engagement piece of said well strip is
7 configured to interlock with a complementary first engagement piece of another well strip.

1 13. The well strip of claim 12 wherein said first engagement piece is substantially
2 positioned near a first end of said well strip and said second engagement piece is substantially
3 positioned near a second end of said well strip.

1 14. The well strip of claim 12 wherein said first engagement piece is positioned on a
2 first wall of said well strip and said second engagement piece is positioned on a second wall of
3 said well strip.

1 15. The well strip of claim 12 wherein said first engagement piece comprises a flange
2 and said second engagement piece comprises a slot and a slit.

1 16. The first well strip of claim 13 further comprising a second engagement piece at
2 said first end and a first engagement piece at said second end.

1 17. A method for increasing the load capacity of an automated sample analyzer,
2 comprising the step of:

3 interlocking at least a first well strip and a second well strip together to form a sample
4 holder system, said first and second well strips comprising a plurality of sample wells.

1 18. The method of claim 17 further comprising:
2 loading a plurality of said sample holder systems onto said automated sample analyzer;
3 detaching a first well strip from said sample holder system by disengaging said first well
4 strip from a second well strip;
5 moving said first well strip; and,
6 analyzing said samples in said plurality of wells in said first well strip.

1 19. The method of claim 17 wherein interlocking a plurality of well strips to form a
2 sample holder system comprises slidably moving said first well strip horizontally relative to
3 second well strip to engage said first and second well strips.

4 20. The method of claim 17 further comprising introducing a sample into said sample
5 wells wherein said sample comprises a body fluid.

6 21. The method of claim 20 wherein said body fluid comprises blood.

1 22. The method of claim 20 wherein said body fluid comprises urine.

2 23. The method of claim 20 wherein said body fluid comprises serum.

3 24. The method of claim 18 wherein said sample analysis comprises analyzing said
4 sample for a coagulation disorder.

1 25. The method of claim 18 wherein said sample analysis comprises analyzing said
2 sample for electrolyte concentration.

1 26. The method of claim 18 wherein said sample analysis comprises analyzing said
2 sample to determine the presence or concentration of a drug.

1 27. A sample holder system comprising:

2 a first well strip comprising a plurality of wells, a first and second side wall, and a first
3 and second end; and,

4 at least a second well strip comprising a plurality of wells, a first and second side wall,
5 and a first and a second end;

6 each of said first well strip and said at least a second well strip further comprising a
7 flange on said first end of said first side wall, a slot on said second end of said first side wall, a
8 slot on said first end of said second side wall, and a flange on said second end of said second side
9 wall, wherein said slot and flange of said at least a second side wall of said first well strip
10 interlocks with said flange and said slot of said first side wall of said second well strip to form a
11 sample holder system.